Remarks

Claims 3-41 were pending in the present application, of which claims 27 and 37 have been cancelled. It is submitted that that pending claims define allowable subject matter.

Claims 3-14, 25-32 and 39-40 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bender (USP 6,609,063) in view of Israni et al. (USP 6,308,177). Claims 16-19, 21-24, 33-38 and 41 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bender in view of Israni and Nomura (USP 5,371,678). Applicants respectfully traverse these rejections for reasons set forth hereafter.

Claim 39 defines a method for organizing roadway network data in a memory storage device that comprises, among other things, providing a data set that includes node records uniquely associated with corresponding nodes in a roadway network. The nodes are distributed in a multi-dimension array. The method further includes assigning a unique number from a one-dimension array to each node record based on a geographic location of a corresponding node relative to surrounding nodes such that geographically close nodes are assigned close unique numbers from the one-dimension array, reordering the node records into a node list based on the unique numbers, dividing the node list into at least first and second node blocks by grouping consecutively numbered node records proximate one another in the first and second node blocks and storing nodes records in the first node block in contiguous memory.

Bender describes a map database having attributes associated with no-outlet segments and circular segments. In Bender, the method performs a route calculation which retrieves a data structure that represents a successor segment with a first node and a second node. An attribute is identified in the data structure that identifies the successor segment as a segment that connects a road network at the first node with an isolated portion of the road network at the second node. The route refrains from exploring the isolated portion of the road network if the search retrieved the successor segment at the first node. (Column 2, lines 56 --67).

Bender does not assigning a unique number from a one-dimension array to each node such that geographically close nodes are assigned close unique numbers from the one-dimension array. Instead, each geographic feature is identified in Bender's database by its physical location, namely its latitude, longitude and altitude. The use of a latitude, longitude and altitude combination does not constitute, nor render obvious, the claimed assigning step. Nor does Bender reorder the node records in a node list based on the unique numbers. Claim 39 clearly

defines the unique number to be from a one-dimension array. Bender's latitude, longitude and altitude combinations are not from a one-dimension array. Consequently, Bender is incapable of reordering node records into a node list based on the unique numbers of a one-dimension array. Bender further describes the database as follows:

> In the database 114 that stores/holds the data, which represents the road network 100, there may also be a data structure for each node in the geographic region. The node data structure may have associated with it information that allow identification of the segment(s) that connect to it and/or its geographic position such as its latitude and longitude coordinates (column 5, lines 27-33).

From the foregoing, it is clear that Bender does not teach or suggest the assigning or reordering steps of claim 39.

Israni describes a system and method for storing geographic data and is discussed in detail in the previous response. In the outstanding office action, columns 24 and 25 of Israni are cited for the proposition that Israni divides a node list into first and second node blocks by grouping consecutively numbered node records. However, as explained above, Bender does not teach or suggest the claimed assigning and reordering steps. Consequently, it necessarily follows that Israni would not render obvious the claimed dividing step. Israni fails to make up for the deficiencies of Bender.

With regard to claims 16, the undersigned respectfully submits that it would have been obvious to modify Bender in the suggested manner. In the outstanding office action, it is noted that Bender does not disclose bearing direction, nor does Bender disclose headers and footers. It is submitted that the secondary references to Israni and Nomura would not have motivated one to modify Bender to add both. Bender describes a particular record structure with respect to Figure 3, along with various search techniques to avoid isolated portions of a road network. It is not at all clear how Benders technique for avoiding isolated road portions would be combined with a search technique based on bearing. Israni's data structure does not include information regarding isolated road portions. Consequently, Israni fails to teach or suggest how to utilize bearing information in connection with a data structure built to avoid searches through isolated road portions. It is improper to selectively apply separate and distinct features of various prior art references in an attempt to reconstruct the claimed invention. Hence, Israni fails to make up for

the deficiencies of Bender. Nomura fails to make up for the deficiencies of Israni and Bender for reasons of record.

Claim 25 generally recites a data structure embodied on a computer readable medium for defining a roadway network having road segments intersecting at nodes. The data structure comprises node records containing data indicative of corresponding nodes in a roadway network. Claim 25 clearly defines a first node record that corresponds to a single first node and that contains adjacency information for adjacent nodes. The adjacency information is defined as indicative of an estimated location of only adjacent nodes directly connected to the first node, where the estimated location is determined with respect to the first node. The node records further comprise fields storing bearing data indicative of directions in which corresponding road networks extend from the corresponding nodes. As explained above, it would not have been obvious to modify Bender's data structure to include bearing data.

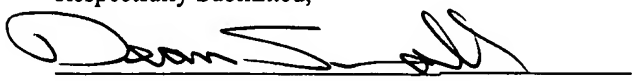
Claim 33 recites a navigation system comprising, among other things, a first memory storing data sets indicative of roadway networks. The data sets are stored in blocks of data wherein the blocks of data include geographical data indicative of nodes. Each block of data includes at least one bearing component. The geographic data is stored as node records, with each node record corresponding to a single node and containing adjacent see information indicative of an estimated location of only adjacent nodes directly connected to the corresponding node. The blocks of data also include a plurality of nodes in equal plurality of node records, with each node record including a distance component and at least one bearing component associated with at least one adjacent node. The system further comprises a second memory storing at least one block of data temporarily, a route calculation module calculating a plant route over the roadway network between source and destination locations based on the data stored in the second memory, and a display displaying the route calculated by the route calculation module.

As explained above, it would not a been obvious to modify Bender's system to include bearing components, not based on Israni's teachings, nor the teachings of Nomura, nor any other reference of record. Hence, claim 33 is neither anticipated nor rendered obvious.

In view of the foregoing comments, it is respectfully submitted that the prior art fails to teach or suggest the claimed invention. Should anything remain in order to place the present

application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



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